

## NOTES ON THE FAMILY AMPULLARIIDÆ.

By G. B. SOWERBY, F.L.S.

(Continued from vol. viii, p. 362.)

Read 14th January, 1910.

Sub-genus PILA, Boltén.

*Pila*, Mus. Bolt., 1798, p. 145.*Ampullaria*, Lamarck, Prodrôme, p. 76 (*ex parte*).*Pachystoma*, Guilding, Zool. Journ., 1828, vol. iii, p. 536.*Pachylabra*, Swainson, Malac., 1840, p. 339.*Pomus*, Gray, Proc. Zool. Soc., 1847, p. 148.Type.—*Helix ampullacea*, Linn.

## 107. AMPULLARIA ADUSTA, Reeve.

Conch. Icon., sp. 11.

*A. pilula*, Reeve, Conch. Icon., figs. 12, 36.*Hab.*—Zanzibar.Comparing Reeve's types of *adusta* and *pilula* I am quite unable to separate them.

## 108. AMPULLARIA AFRICANA, von Martens.

S.B. Nat. Fr. Berlin, 1886, p. 112.

*Hab.*—Nyassa.

## 109. AMPULLARIA ALUCINANS, n.sp. p. 63.

## 110. AMPULLARIA AMPULLACEA (Linn.).

*Helix ampullacea*, Linn., Syst. Nat., p. 1244.*Nerita ampullacea*, Müller, Hist. Verm., p. 172.*Ampullaria ampullacea*, Reeve, Conch. Icon., sp. 48.*A. fasciata*, Roissy, 1805 (*vide* "Hist. Nat. générale et particulière des Moll.").*A. fasciata*, Lamarck, Anim. sans Vert., 1819, vol. vi, p. 177.*A. Celebensis*, Quoy et Gaim., Voy. de l'Astrol., vol. iii, p. 167, pl. lvii, figs. 1-4.*A. expansa*, Nevill (as var. of *conica*).*A. Gruneri*, Philippi, Conch. Cab., p. 37, pl. ix, fig. 8.*A. magnifica*, Dunker, Conch. Cab., p. 64, pl. xxi, fig. 1.*A. ochracea*, Jay, Cat., pl. iii, fig. 8.*Pomacea orbata*, Perry, Conchology, 1811, pl. xxviii, No. 5.*A. Sumatrensis*, Phil., Conch. Cab., p. 57, pl. xix, figs. 1, 2.*Hab.*—Siam, Java, Sumatra, Borneo, etc.

It is difficult to define the limits of this species. Some of the names quoted as synonyms simply refer to immature shells, while others refer to fully developed shells quite inseparable from *A. ampullacea*. There are others, such as *Perakensis*, De Morgan, *Wellesleyana*, De Morgan, *turbinis*, Lea, and *Dalyi*, Blanford, which would perhaps more properly be regarded as varieties or synonyms, but, being in some doubt, I think it best at present to include them in the list as species.

## 111. AMPULLARIA APERTA, Philippi.

Zeits. Mal., 1849, p. 18: Hanley & Theobald, Conch. Ind., pl. cxv, fig. 4 (as *A. saxea*, var.).

*Hab.*—Pegu, Akyab, Pongday.

The specimens figured for this species in Reeve's *Conchologia Iconica* are not Philippi's *A. aperta*, but a South American species named by Nevill *A. (Pomus) erronea*.

## 112. AMPULLARIA BALANOIDEA, Gould.

Bost. Soc. Nat. Hist., 1850, vol. iii; Reeve, Conch. Icon., sp. 129; Petit, Journ. de Conch., vol. ii, p. 26.

*Hab.*—Liberia.

## 113. AMPULLARIA BEGINI, Morlet.

Journ. de Conch., 1889, vol. xxxvii, p. 184, pl. viii, fig. 1.

*Hab.*—Cambodia.

## 114. AMPULLARIA BILINEATA, Reeve.

Conch. Icon., sp. 110.

*Hab.*—?

## 115. AMPULLARIA CECILLEI, Philippi.

Zeits. Malak., 1848, p. 191.

*A. inops*, Morelet, Rev. Zool., 1851.

*Hab.*—Madagascar.

## 116. AMPULLARIA CHEVALIERI, Germain.

Bull. Mus. Paris, vol. x, p. 469.

*Hab.*—Chari Region.

## 117. AMPULLARIA COMPACTA, Reeve.

Conch. Icon., figs, 62, 71.

*A. paludinoïdes*, var., Hanley & Theobald, Conch. Ind., pl. xiv, fig. 7.

*Hab.*—Malacca, Mandalay, Tenasserim, etc.

I place *A. paludinoïdes* as a variety of *A. conica*, and it is quite possible that *A. compacta*, and also the following species, *A. complicata*, may merge into the same, but the specimens I have seen at present seem fairly separable.

## 118. AMPULLARIA COMPLICATA, Reeve.

Conch. Icon., sp. 89.

*Hab.*—"Philippines" (?).

See note on *A. compacta*.

## 119. AMPULLARIA CONICA, Gray.

Wood's Index Test. Supp., 1828; Hanley, Conch. Misc., pl. iii, fig. 13; Reeve, Conch. Icon., sp. 10.

The following, which have been described as different species, I regard as varieties:—

Var. *Borneensis*, Philippi, Conch. Cab., p. 31, pl. viii, fig. 3.

*Hab.*—Borneo, Singapore, etc.

Var. *Javanica*, Reeve, Conch. Icon., sp. 96.

*Hab.*—Java.

Var. *lubrica*, Reeve, Conch. Icon., sp. 61.

Var. *orientalis*, Philippi, Zeits. Malak., 1848.

Var. *scutata*, Mousson, Moll. Java, 1849 = *sulcata*, Mousson.

*Hab.*—Java.

Var. *Stoliczkana*, Nevill, Cat. Moll. Ind. Mus., 1877, fasc. E.

*Hab.*—Penang.

Var. *turbinoides*, Reeve, Conch. Icon., sp. 37.

120. AMPULLARIA DALYI, Blanford.

Proc. Malac. Soc., 1903, vol. v, p. 281, pl. viii, fig. 1.

*Hab.*—Siam.

Blanford thinks this probably a sub-species of *turbinis*, Lea, distinguished by the absence of transverse colour-bands, and the presence of rather peculiar raised longitudinal streaks. Perhaps this and *turbinis* may be considered varieties of *A. ampullaria*, but the specimens I have seen seem fairly separable.

121. AMPULLARIA DECOCTA, Mabile.

Bull. Soc. Malac. France, vol. iv, p. 155.

*Hab.*—Tonkin.

122. AMPULLARIA DIRA, Reeve.

Conch. Icon., sp. 125.

*Hab.*—?

123. AMPULLARIA EXIGUA, Philippi.

Conch. Cab., p. 46, pl. xiii, fig. 4.

*Hab.*—Egypt (Pætel, Catalogue).

124. AMPULLARIA FULIGINEA, Philippi (Koch).

Conch. Cab., p. 53, pl. xvi, fig. 6.

*Hab.*—Madagascar.

125. AMPULLARIA GLOBOSA, Swainson.

Zool. Illus., ser. I, pl. cxix; Philippi, Conch. Cab., p. 8, pl. i, fig. 3; Reeve, Conch. Icon., figs. 46, 47.

*Hab.*—Calcutta, Bengal, Orissa, etc.

Var. *cinerea*, Reeve, Conch. Icon., sp. 94; Hanley & Theobald, Conch. Ind., pl. cxiii, fig. 1.

*Hab.*—Ceylon (Reeve).

Shell smaller than the typical *globosa*, of an ash tint with colour-bands.

Var. *corrugata*, Swainson, Zool. Illus., ser. I, pl. cxx; Hanley & Theob., Conch. Ind., pl. cxiii, fig. 2. = *A. rugosa*, Sowb., Gen. of Shells.

Var. *encaustica*, Reeve, Conch. Icon., sp. 76.

A small form, somewhat anteriorly attenuated, and with a less prominent spire than the type.

Var. *incrassatula*, Nevill, Moll. Ind. Mus. Calcutta, 1884, pt. ii, p. 2.

*Hab.*—Calcutta.

Var. *longispira*, Nevill, Moll. Ind. Mus. Calc., 1884, pt. ii, p. 2.

Var. *sinistrorsa*, Nevill, Cat. Moll., July, 1877, fasc. E, p. 2.

*Hab.*—Calcutta.

Var. *spherica*, Hanley & Theobald, Conch. Ind., pl. cxiii, fig. 4.

*Hab.*—Moradabad.

An *A. globosa* with colour-bands figures in the Conch. Indica (pl. cxiii, fig. 5) as var. *fasciata*, but it is not *A. fasciata*, Lamarck (= *ampullacea*).

126. AMPULLARIA GORDONI, Smith.

Ann. Mag. Nat. Hist., 1892, vol. x, p. 382.

*Hab.*—Victoria Nyanza.

127. AMPULLARIA GRACILIS, Lea.

Proc. Acad. Nat. Sci. Philad., vol. viii, p. 110.

*Hab.*—Siam.

128. AMPULLARIA GRADATA, Smith.

Proc. Zool. Soc., 1881, p. 289, pl. xxxiii, fig. 22.

*Hab.*—Between Nyassa and east coast of East Central Africa.

129. AMPULLARIA LARGILLIERTI, Philippi.

Zeits. für Malak., 1848, p. 192; Conch. Cab., pl. xiii, fig. 5.

= *A. filosa*, Reeve, Conch. Icon., sp. 88.

*Hab.*—Madagascar.

Reeve (Conch. Icon., fig. 109) has mistaken a variety of *A. virens* for this species.

130. AMPULLARIA LEOPOLDVILLENIS, Putzeys.

Proc. Soc. Malac. Belg., vol. xxvii, p. 98.

*Hab.*—Leopoldville, Congo.

131. AMPULLARIA LETOURNEUXI, Bourguignat.

Descrip. div. ésp. Moll. de l'Égypte, etc., 1879, p. 27.

*Hab.*—Victoria Nyanza.

Von Martens has placed this as a synonym of *A. adusta*, Reeve, but having seen Bourguignat's type I cannot recognize it as such. The shell is slightly compressed at the suture, and rather acuminate at each end.

132. AMPULLARIA LUZONICA, Reeve.

Conch. Icon., sp. 26.

*Hab.*—Luzon.

133. AMPULLARIA MADAGASCARIENSIS, Smith.  
Proc. Zool. Soc., 1882, p. 384, pl. xxii, figs. 8, 9.

*Hab.*—Madagascar.

134. AMPULLARIA MÆSTA, Reeve.  
Conch. Icon., sp. 92.

*Hab.*—Ceylon.

135. AMPULLARIA NIGRICANS, n.sp. p. 63.

*Hab.*—Buddu, Uganda.

136. AMPULLARIA NYANZÆ, Smith.  
Ann. Mag. Nat. Hist., 1892, vol. x, p. 382.

*Hab.*—Victoria Nyanza.

137. AMPULLARIA OCCIDENTALIS, Mousson.  
Journ. de Conch., 1887, vol. xxxv, p. 299, pl. xii, fig. 9.

*Hab.*—Kunene, South Africa; Dongwenna, Angola (in shallow swamp).

138. AMPULLARIA OLEA, Reeve.  
Conch. Icon., sp. 102.

*Hab.*—Penang; Tongking.

139. AMPULLARIA OVATA, Olivier.  
Voy. Emp. Ottom., 1804; Reeve, Conch. Icon., sp. 64.

The following I regard as synonyms:—

*A. Bourguignati*, Billotti, Bull. Soc. Malac. Fr., 1855, p. 107, pl. vii.

*Hab.*—Lake Ballat, Isthmus of Suez.

The specimen in Bourguignat's collection is in bad condition, almost bleached, but it shows very faint colour-bands.

*A. Bridouwi*, Bourg., Hist. Malac. du Lac Tanganyika, vol. i, p. 72, pl. v, fig. 22.

A decorticated shell of the form of *Kordofana*, showing strong colour-bands.

*A. Dumesmiliana*, Billotti, Amp. Afr. in Bull. Soc. Malac. Fr., 1885, p. 105, pl. vi, fig. 2.

This is simply a young specimen of *ovata*.

*A. lucida*, Parr., Jay Cat., p. 282.

*A. Raymondi*, Bourg., Moll. Nouv., 1863, p. 76, pl. ix, fig. 4.

Type in a bleached, chalky condition.

Var. *Kordofana*, Parreys; Philippi, Conch. Cab., p. 44, pl. xiii, fig. 1.

Differs from the typical *A. ovata* in its broader, rather oblique form, and its more or less roughly plicate surface. Specimens in Bourguignat's collection representing *ovata* and *Kordofana* present such differences that it is no wonder they have been regarded as distinct species, but intermediate forms show the connexion.

*Hab.* (*A. ovata* and varieties).—Egypt, Nubia, Abyssinia, Lake Tanganyika, Isthmus of Suez, etc.

## 140. AMPULLARIA PALUSTRIS, Morelet.

Journ. de Conch., 1864, vol. xii, p. 158.

*Hab.*—Lake Ebrie, near Senegal.

## 141. AMPULLARIA PERAKENSIS, De Morgan.

Bull. Soc. Zool. France, 1885, vol. x, p. 418.

*Hab.*—Perak.

## 142. AMPULLARIA SAXEA, Reeve.

Conch. Icon., sp. 108; Hanley & Theobald, Conch. Indica, pl. cxv, fig. 3 (fig. 4 represents *A. aperta*, Philippi, a different species).

*Hab.*—Pegu, etc.

Var. *nux*, Reeve, Conch. Icon.

I am unable to find any important difference between this and *saxea*.

## 143. AMPULLARIA SPECIOSA, Philippi.

Zeits. Malak., 1849, p. 18; Conch. Cab., pl. xi, fig. 2; Reeve, Conch. Icon., sp. 33.

*A. canaliculata*, Reeve, Conch. Icon., sp. 79 (as of Lamarck).

*Hab.*—Zanzibar.

## 144. AMPULLARIA SUBSCUTATA, Mousson.

Journ. de Conch., 1882, vol. xxx, p. 46, pl. iii, fig. 6.

*Hab.*—Madagascar.

## 145. AMPULLARIA THEOBALDI, Hanley &amp; Theobald.

Conch. Indica, pl. cxv, fig. 2.

*Hab.*—Pegu.

## 146. AMPULLARIA TURBINIS, Lea.

Proc. Acad. Nat. Sci. Philad., 1856, p. 288.

*Hab.*—Siam.

Var. *erythrocheila*, Dautzenberg & Fischer, Journ. de Conch., 1905, p. 426.

*Hab.*—Mekong à Chandoc.

Var. *subampullacea*, Nevill, Moll. Ind. Mus. Calcutta, pt. ii, p. 6.

Var. *subglobosa*, id., op. cit.

*Hab.*—Perak.

There is little beyond the depression of the spire to distinguish *A. turbinis* from *A. ampullacea*, and it is with some doubt that I keep them separate. The difference, however, as far as my observation goes, seems to be fairly constant.

## 147. AMPULLARIA VIRENS, Lamarck.

Anim. sans Vert., 1819, vol. vi, p. 179.

*A. carinata*, Swainson, Zool. Illus., ser. II (*non* Lamarck); Reeve, Conch. Icon., sp. 58; Hanley & Theobald, Conch. Ind., pl. cxiv, fig. 1; Philippi, Conch. Cab., pl. i, fig. 2.

*A. Largillierii*, Reeve, Conch. Icon., sp. 109 (*non* Phil.).

*Hab.*—Cochin, Bombay, Pondicherry, Ceylon, etc.

The following I regard as varieties :—

Var. *Layardi*, Reeve, Conch. Icon., figs. 24 and 40.

*Hab.*—Ceylon.

A more globose form and darker-coloured.

Var. *Malabarica*, Philippi, Conch. Cab., p. 29, pl. vii.

*Hab.*—Malabar.

Lighter colour and substance, spire rather more elevated, umbilicus narrower.

Var. *Maura*, Reeve, Conch. Icon., sp. 57.

*Hab.*—Assam.

Mouth stained with dark purple, otherwise same as type.

Var. *pallens*, Philippi, Conch. Cab., p. 32, pl. viii, fig. 4.

Var. *paludinoides*, Philippi (Christofori & Jan), Conch. Cab., p. 27, pl. vii, fig. 4.

The shell figured in the Conch. Ind. (pl. cxiv, fig. 7) as a variety of *paludinoides* is *A. compacta*, Reeve.

Var. *Fischbeini*, Dohrn, Proc. Zool. Soc., 1858.

*Hab.*—Ceylon.

Transversely banded, and spotted on the lip.

148. AMPULLARIA VITTATA, Reeve.

Conch. Icon., sp. 78.

*Hab.*—Philippines (Reeve).

149. AMPULLARIA WELLESLEYENSIS, De Morgan.

Bull. Soc. Zool. France, 1885, vol. x, p. 419.

*Hab.*—Wellesley Province, Malay Peninsula.

150. AMPULLARIA WERNEI, Philippi.

Conch. Cab., p. 19, pl. v, fig. 4 ; pl. xvii, fig. 2.

*Hab.*—White Nile.

151. AMPULLARIA WINKLEYI, Pilsbry.

Acad. Nat. Sci. Philad., 1901, p. 187.

*Hab.*—Burma.

152. AMPULLARIA WOODWARDI, Dohrn.

Proc. Zool. Soc., 1858, p. 134.

*Hab.*—Ceylon.

Sub-genus SAULEA, Gray.

*Saulea*, Gray, Proc. Zool. Soc., 1867.

153. AMPULLARIA VITREA (Born).

Test. Mus. Vindobon., pl. xv, figs. 15, 16 ; Reeve, Conch. Icon., sp. 80.

*Hab.*—Sierra Leone, Liberia, West Africa.



## DESCRIPTION OF NEW SPECIES.

## AMPULLARIA ALUCINANS, n.sp.

Testa late turbinata, mediocriter umbilicata, fusco-olivacea, fasciis numerosis angustis nigro-fuscis ornata, longitudinaliter irregulariter plicata et striata, striis transversis subtilissimis decussata; spira brevis; anfractus convexi, supra planulati; ultimus latiusculus, superne rotunde angulatus, supra angulum leviter depressus, infra angulum rotunde convexus, basim versus leviter contractus; apertura latiuscula, intus fasciata; peristoma tenue. Long. 23, diam. 23 mm.; apertura, long. 22, lat. 12 mm.

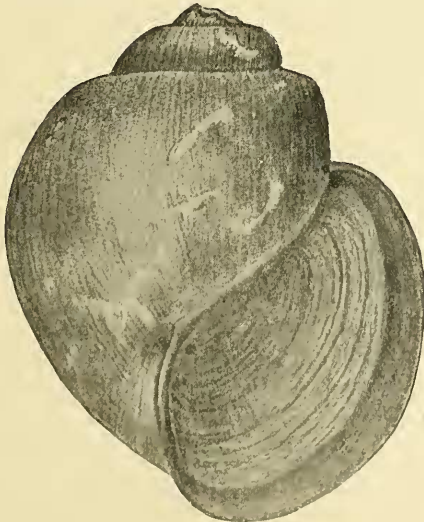


*Hab.*—Ceylon.

This species might easily be mistaken for the Brazilian *A. decussata*, Moricand, to which it bears a remarkably close resemblance. Its transverse striæ are, however, much less conspicuous, and it is, of course, far removed from that species by its eastern habitat and shelly operculum.

## AMPULLARIA NIGRICANS, n.sp.

Testa ovata, anguste umbilicata, ubique nigro-olivacea, nitens, longitudinaliter irregulariter vix conspicue plicata, et subtilissime





striata; spira elatiuscula; anfractus rotunde convexi, superne obtuse angulati, ad suturam sublate depressi; ultimus ventricosus; apertura ovata, mediocriter lata, intus violacea, versus marginem nigrescens; peristoma tenue, haud reflexum. Long. 52, lat. 54 mm.; apertura, long. 45, lat. 27 mm.

*Hab.*—Buddu, Uganda, 4000 feet.

This species is distinguished by its very dark colouring. It has much the same form as the typical *A. ovata*, but more depressed at the suture. It is somewhat similar in appearance to *A. papyracea*, Spix, from Meobamba.

#### ERRATA.

Vol. viii, p. 351. For *Ampullaria Hopetonensis*, Lea, read *A. paludosa*, Say, New Harmony Diss., 1829, vol. ii, p. 260, and place *A. Hopetonensis*, Lea, 1839, in the synonymy.  
p. 352. Remove *A. paludosa* from the synonymy of var. *Dysoni*.

I am indebted to Mr. Bryant Walker, of Detroit, Michigan, for this correction. In giving the date of the publication of Say's *Ampullaria paludosa* as 1840, I find I was referring to a reprint, the name having been published in 1829 as a substitute for *A. depressa*, preoccupied by Lamarck for a fossil species. It is not the variety named by Hanley *Dysoni*, but the typical form named by Lea *Hopetonensis*.